ASSIGNMENT 8

Textbook Assignment: "Test Equipment," chapter 9, pages 9-7 through 9-24; and "Communication Theory and Equipment," chapter 10, pages 10-1 through 10-19.

8–1. Which of the following meters is the most accurate?

1. 10,000 ohms per volt
2. 5,000 ohms per volt
3. 2,000 ohms per volt
4. 1,000 ohms per volt

8-2. Which of the following functions does a MEGGER perform?

1. Measures peak-to-peak waveforms
2. Measures rms voltage
3. Measures the resistance of insulation
4. All of the above

8–3. Which of the following functions does a differential voltmeter perform?

1. Measures true voltage
2. Compares AN unknown voltage to a reference voltage
3. Measures voltage deviation
4. Both 2 and 3 above

8–4. Which of the following pieces of test equipment would be used to create a desired frequency and voltage for signal injection?

1. Frequency counter
2. Signal tracer
3. Signal generator
4. All of the above

8–5. Which of the following types of test equipment can measure frequency?

1. Frequency standards
2. Frequency counters
3. Signal generators
4. Both 2 and 3 above

8-6. Which of the following electronic equipment provides the most accurate frequency source?

1. Signal generator
2. Electronic frequency counter
3. Frequency standard
4. All of the above

8-7. Which of the following wattmeters measure(s) the incident and reflected power of a transmitter?

1. Bridge wattmeter
2. Thruline wattmeter
3. Microwave wattmeter
4. Both 2 and 3 above

8-8. If a technician fabricates a piece of test equipment to use in troubleshooting, how should you check it and then account for it?

1. Check it for good mechanical and electrical connections and have the technician sign for it
2. Have it electrically safety checked and inventory it on your GPETE list
3. Check it for good electrical connections and have the technician keep it locked up
4. Check it for both good mechanical and electrical connections and notify supply

8-9. What type of electronic test equipment troubleshoots printed circuit cards automatically?

1. TMDE
2. ATE
3. GPETE
4. SPETE

8-10. The EMO is responsible for ensuring that all test equipment allowed in the SPETERL is aboard and calibrated.

1. True
2. False

8-11. In which of the following publications can you find GPETE indexed and identified for all electronic systems?

1. NAVSEA ST820-AA–010.ATEEM/PCB CAT
2. NAVMAT P-9491
3. NAVELEX TAMS ACTION NEWS
4. NAVSEA ST000-AA-IDX–010/PEETE

8–12. Which of the following publications lists PEETE requirements for your ship?

1. PEETE Index
2. SPETERL
3. NAVMAT P-9491
4. TAMS

8--13. Which of the following publications list(s) test equipment requirements for various prime electronic equipments aboard ship?

1. PEETE Index, Section I
2. SPETERL
3. NAVMAT P-9491
4. All of the above

8–14. What PEETE Index section identifies SCAT code substitutes for test equipment models assigned to each SCAT code?

1. II
2. III
3. IV
4. V

8-15. In which of the following publications can you find information on commercial test equipment?

1. NAVMAT P-9491
2. PEETE Index, Appendix A
3. PEETE Index, Appendix B
4. Both 2 and 3 above

8-16. In which of the following publications can you find NSNs for most preferred or recently obtained test equipments within each SCAT code?

1. PEETE Index, Appendix C
2. PEETE Index, Appendix E
3. Both 1 and 2 above
4. SPETERL

8-17. Generally, how frequently does RSG expect to receive your calibration package?

1. Weekly
2. Monthly
3. Semi-annually
4. Annually

8-18. If you have test equipment that must be issued to other divisions, which of the following actions should you take concerning that equipment?

1. Ensure that the other divisions keep it under lock and key
2. Simply issue each item to the person who comes for it
3. Maintain a subcustody file with the signature of the responsible division officer
4. Issue each item and write down who took custody of it

8-19. Which of the following test equipment reviews is/are conducted aboard ship?

1. TYCOM review
2. TECRR review
3. Fleet Test Equipment Allowance Program review
4. All of the above

8-20. What is the purpose of a TYCOM review?

1. To conduct a test equipment inventory and develop a calibration report
2. To update SCLSIS
3. To determine excesses
4. All of the above

8-21. To which of the following agencies may you turn in excess test equipment?

1. TECRR Redistribution Center Chesapeake, Virginia
2. FTEAP Redistribution Center, Pearl Harbor, Hawaii
3. FTEAP Redistribution Center, San Diego, California
4. All of the above

8-22. If you cannot locate a piece of test equipment at a redistribution center, you should look for it at salvage to save money.

1. True
2. False

8-23. What category of test equipment is purchased by NAVSEA for new systems being installed in the fleet?

1. GEIR
2. GINO
3. GASP
4. GAGE

8-24. Through which of the following programs can you obtain GPETE for-short term use?

1. GEIR
2. GINO
3. GASP
4. Loan pools

8–25. In which of the following publications can you obtain guidance in the stowage of PEETE?

1. NAVSEA ST000-AB-010/PEETE
2. NAVELEX EE172-FA-GYD-010/E120
3. COMNAVAIRLANTINST 5214.1
4. All of the above

8-26. Test Equipment Calibration is performed at the lowest echelon possible, depending on the availability of standards and qualified personnel.

1. True
2. False

8-27. When equipment is calibrated by an FCA, where is the actual calibration done?

1. At an RSG
2. Aboard ship
3. At an IMA
4. At a civilian shore facility

8-28. What agency certifies FCAs?

1. NAVELEX
2. NAVSEA
3. NAVSHIPS
4. SPAWARS

8-29. Which of the following types of calibration facilities provide service to Navy units?

1. Field Calibration Activities
2. Shorebased Calibration Laboratories
3. Shipboard Navy Calibration Laboratories
4. All of the above

8-30. Which of the following publications contains a listing of authorized Navy calibration facilities?

1. NAVAIRINST 9090.1
2. NAVAIR 17-35NCA-1
3. COMDNOTE 5600
4. NAVSEA SE000-00–EIM-010

8–31. What agency is responsible for designating and revising calibration intervals for Navy TAMS and standards?

1. NAVSEA
2. NAVAIR
3. NAVELEX
4. Navy Metrology Engineering Center

8-32. Which of the following documents list(s) all test equipment calibration intervals in the Navy?

1. SPETERL
2. METRL
3. Both 1 and 2 above
4. RSG calibration list

8-33. Which of the following is a data processing system designed to provide a standardized system for the recall and scheduling of test equipment?

1. SPETERL
2. METRL
3. MEASURE
4. RSTE

8-34. What is the primary source for MEASURE operation?

1. OPNAV 43P6A
2. CSP-1
3. DOD-HDBK-263
4. OPNAVINST 1540.50

8–35. Each piece of test equipment has its own METER card, which is the primary means of providing input to MEASURE.

1. True
2. False

8-36. What is the best management tool of the MEASURE program?

1. Format 300
2. Format 310
3. Format 350
4. Format 800

QUESTIONS 8-37 THROUGH 8-70 PERTAIN TO CHAPTER 10.

8-37. Which of the following purposes does radio transmitting equipment serve?

1. Detects, amplifies, and demodulates signals
2. Generates, amplifies, and modulates signals
3. Converts the audio signal of encoded transmissions into original intelligence
4. Generates original intelligence

8-38. What purpose does receiving equipment serve?

1. Converts the original intelligence into encoded transmissions
2. Generates, amplifies, and modulates signals
3. Detects, amplifies, and demodulates signals
4. Detects, amplifies, and modulates signals

8-39. What purpose does terminal equipment serve?

1. Converts the audio signals of encoded transmissions into original intelligence
2. Generates, amplifies, and modulates signals
3. Detects, amplifies, and demodulates signals
4. Generates demodulated signals

8-40. On which of the following frequencies can UHF radio equipment operate?

1. 150 mHz
2. 200 mHz
3. 400 mHz
4. 3000 mHz

8-41. On which of the following frequencies can VHF radio equipment operate?

1. 20 mHz
2. 200 mHz
3. 320 mHz
4. 420 mHz

8-42. What agency is assigned the responsibility for allocation. assignment and protection of all Navy frequencies?

1. NAVSEA
2. COMNAVTELCOM
3. SPAWARS
4. NAVELEX

8-43. What frequency range is used for PLSO communication to submerged submarines?

1. ULF
2. ELF
3. VLF
4. LF

8-44. What frequency range is used for fleet communications, navigation. time signals, satellite comnuni-cation, and as a backup to shortwave?

1. HF
2. UHF
3. VHF
4. VLF

8-45. What frequency range is used to provide frequency-division multiplexing for rtty broadcast traffic?

1. HF
2. LF
3. UHF
4. VHF

8-46. What frequency range is associated with search and rescue near the coast?

1. UHF
2. VHF
3. MF
4. LF

8-47. What frequency range is used for long range transmissions bounced off the ionosphere?

1. UHF
2. VHF
3. MF
4. HF

8-48. What system sends message traffic to ships?

1. Ground to ship
2. Fleet broadcast
3. Point-to-point
4. Ship-to-shore

8-49. What frequency range is considered line of sight?

1. Vhf and uhf
2. Vhf only
3. Hf only
4. Mf and below

8-50. What frequency range encompasses radar?

1. Uhf
2. Vhf
3. Ehf
4. Shf

8-51. By what means do radio waves travel from a transmitting antenna to a receiving antenna?

1. Polarization
2. Propagation
3. Ionization
4. Transmutation

8-52. What type of medium near a groundwave site will provide the greatest transmission distance?

1. Clay
2. Sand
3. Rock
4. Salt water

8-53. What type of polarization provides the maximum signal strength for a ground wave?

1. Horizontal
2. Vertical
3. Bipolar
4. Monopolar

8-54. What type of propagation is radiated upward to be reflected back to earth at long range?

1. Skywave
2. Spacewave
3. Groundwave
4. Subwave

8-55. At what distance above the earth does the upper atmosphere begin?

1. 10 miles
2. 20 miles
3. 30 miles
4. 40 miles

8-56. What is the definition of the “critical angle” of transmission

1. The angle at which radio waves are refracted back to earth
2. The angle at which radio waves will be refracted but not enough to return to earth
3. The angle at which the spacewave is generated
4. The angle at which the sky wave is generated

8-57. When, during a twenty-four hour period, will a refracted wave attain its greatest distance?

1. Sunrise
2. Daytime
3. Sunset
4. Nighttime

8-58 . Which of the following factors has the greatest effect on radio communications?

1. Fading
2. Absorption
3. Refraction
4. Reflection

8-59. What is “frequency diversity”?

1. Absorption of the rf energy in the ionosphere
2. Multipath propagation
3. Two or more receiving antennas spaced some distance apart
4. Two transmitters and two receivers being used

8-60. Which of the following factors account(s) for nearly all energy losses of signals transmitted into the ionosphere?

1. Absorption
2. Ground reflection loss
3. Freespace loss
4. All of the above

8–61. What must radio operators do to overcome radio degradation caused by the phenomenon known as sunspots?

1. Operate at higher frequencies
2. Operate at lower frequencies
3. Operate at medium frequencies
4. Operate at variable frequencies

8-62. What phenomenon occurs as irregular cloudlike patches of unusually high ionization?

1. Sudden ionospheric disturbance
2. Sunspots
3. Sporadic E
4. Ionospheric storms

8-63. Which of the following actions is the most critical for successful communications between two specified locations at any given time of the day?

1. Proper selection of transmitting antenna
2. Proper selection of receivers
3. Frequency selection
4. Proper power level

8-64. Higher frequency radio waves are refracted less by the atmosphere than lower frequency radio waves.

1. True
2. False

8-65. Which of the following antenna characteristics is the most critical regarding frequency capability?

1. Critical length
2. Physical length
3. Electrical length

8-66. Electromagnetic wave polarization is directly proportional to the antenna orientation.

1. True
2. False

8-67. Which of the following antennas radiate and receive well in all directions except from the end?

1. Unidirectional
2. Bidirectional
3. omnidirectional
4. All of the above

8-68. Which of the following is an example of a unidirectional antenna?

1. Vertical whip
2. Horizontal beam
3. Dish
4. Helicoil

8-69. As EMO you will be required to maintain a complete set of radiation patterns for each installed transmit antenna.

1. True
2. False

8-70. What permits an antenna to be used for several different radio frequencies?

1. Multicoupling
2. Impedance matching
3. Fanning antenna arrays
4. Vertical polarization